

CLAIMS:

1. An apparatus for controlling the system supply voltage in a system utilizing a spread spectrum clock signal, the apparatus including:
 - 5 (a) a modulating arrangement operatively connected to apply a first modulation to one of the system supply voltage or a clock signal frequency for the system; and
 - (b) a corresponding modulating arrangement operatively connected to apply a corresponding modulation to the other one of the system supply voltage or the clock signal frequency.
2. The apparatus of Claim 1 further including a power supply circuit, and wherein:
 - 20 (a) the modulating arrangement includes a modulator connected to provide a modulated signal to a reference input to the power supply circuit; and
 - (b) the corresponding modulating arrangement includes an arrangement for applying the system supply voltage to control modulation of the clock signal frequency.
3. The apparatus of Claim 2 wherein the modulator is connected between a DC reference voltage source and the reference input of the power supply circuit.
- 25 4. The apparatus of Claim 2 further including a spread spectrum clock source and wherein the system supply voltage is used to produce a modulation signal for a modulation input to the spread spectrum clock source.

5. The apparatus of Claim 4 further including:

(a) a signal translator connected to receive the system supply voltage and provide a translated output to the modulation input of the spread spectrum clock source.

6. The apparatus of Claim 1 further comprising a spread spectrum clock source having a modulation input, and wherein the modulating arrangement includes a modulation signal source having an output connected to the modulation input of the spread spectrum clock source.

7. The apparatus of Claim 6 further including a power supply circuit having a reference input, and wherein the modulation signal source output is applied to modulate the signal at the reference input.

8. The apparatus of Claim 7 further including a summing junction connected to sum a DC reference voltage and the modulation signal source output to produce a summed output and apply the summed output to the reference input of the power supply circuit.

20. The apparatus of Claim 1 wherein the first modulation and the corresponding modulation comprise unequal waveforms.

10. A spread spectrum clock system including:

(a) a spread spectrum clock source having a frequency modulation input and providing a clock signal;

(b) a power supply circuit providing a supply voltage output;

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- (c) a modulating arrangement operatively connected to apply a first modulation to one of the supply voltage output or the frequency of the clock signal; and
- (d) a corresponding modulating arrangement operatively connected to apply a corresponding modulation to the other one of the supply voltage output or the frequency of the clock signal.

5 11. The apparatus of Claim 10 wherein:

- (a) the modulating arrangement comprises a modulator connected to provide a modulated reference input to the power supply circuit; and
- (b) the corresponding modulating arrangement includes an arrangement for applying the system supply voltage output to control modulation of the clock signal frequency.

12. The apparatus of Claim 11 further including:

- (a) a signal translator connected to receive the system supply voltage output and provide a translated output to the frequency modulation input of the spread spectrum clock source.

20 13. The apparatus of Claim 10 wherein the modulating arrangement comprises a modulation signal source having an output connected to the frequency modulation input to the spread spectrum clock source.

25 14. The apparatus of Claim 13 wherein the modulation signal source output is applied to modulate a signal applied to a reference input of the power supply circuit.

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15. The apparatus of Claim 14 further including a summing junction connected to sum a DC reference voltage and the modulation signal source output and apply a modulated DC output to the reference input of the power supply circuit.

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16. The apparatus of Claim 10 wherein the first modulation waveform and the corresponding modulation waveform are unequal.

17. A method for providing a spread spectrum clock signal for a circuit, the method including the steps of:

- modulating a power supply signal for the circuit at a first modulation; and
- modulating the frequency of the clock signal for the circuit at a corresponding modulation.

18. The method of Claim 17 wherein the step of modulating in the power supply signal for the circuit includes the step of:

- modulating a reference voltage input to a power supply for the circuit.

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19. The method of Claim 17 wherein the step of modulating the frequency of the clock signal for the circuit includes the step of:

- conditioning the modulated power supply signal for the circuit to produce a conditioned signal at the first modulation frequency; and
- applying the conditioned signal to a modulation input of a clock source circuit.

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20. The method of Claim 17 wherein the step of modulating the frequency of the clock signal for the circuit comprises:
 - (a) applying a modulation signal source output to a modulation input of a clock source circuit.
21. The method of Claim 20 wherein the step of modulating the power supply signal for the circuit includes:
 - (a) applying the modulation signal source output to modulate a reference voltage input to a power supply circuit.
22. The method of Claim 21 wherein the step of applying the modulation signal source output to modulate a reference voltage input comprises the step of:
 - (a) summing the modulation signal source output with a DC reference voltage source signal.
23. The method of Claim 17 wherein the first modulation waveform and the corresponding modulation waveform are unequal.

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